PaperCut Payment Gateway Module CyberSource Quick Start Guide

This guide is designed to supplement the *Payment Gateway Module* documentation and provides a guide to installing, setting up, and testing the *Payment Gateway Module* for use with CyberSource's Hosted Order Page (HOP) service. The main *Payment Gateway Module* documentation may be downloaded from:

http://www.papercut.com/anonftp/pub/pcng/ext/payment-gateway/PaymentGatewayModule.pdf

CyberSource is a popular credit card processing gateway solution.

IMPORTANT: *You should have a registered and active CyberSource merchant account with Hosted Order Page functionality activated before installing the payment gateway. CyberSource can assist with these tasks. The login information will be required during setup.*

Setup and testing time should take around 30 minutes. No system level restart is required; however the PaperCut application server will be restarted during the install process. If other administrators are using the PaperCut administration interface at this time, it may be advisable to warn them of the pending restart.

This document is written assuming the reader has good server administration skills and is experienced with general PaperCut administration.

Stage 1: Configuring the CyberSource HOP

Several pieces of information are required from CyberSource before PaperCut can send users to the HOP. These can all be gained from the CyberSource Business Center as follows:

1. Log into the CyberSource Business Center.

2. Navigate to `Tools & Settings -> Hosted Order Page -> Settings`. If the 'Hosted Order Page' menu does not appear then HOP functionality has not been enabled on your CyberSource account. Contact CyberSource to enable HOP.

3. Find the setting `Appearance -> Receipt Page -> Receipt Response URL`. Enable the checkbox marked 'This URL is my custom receipt page'. In the text box enter:

   ```
   http://papercut:9191/rpc/gateway/cybersource/user
   ```

   Where 'papercut' is the hostname of the system running PaperCut. This hostname does not necessarily need to resolve externally (i.e. from the internet), because it is retrieved by the user and not CyberSource. The user is redirected to this URL (or to the Decline Response URL) after making a payment.

4. Find the setting `Appearance -> Decline Page -> Decline Response URL`. Enable the checkbox marked 'This URL is my custom decline page'. In the text box enter:

   ```
   http://papercut:9191/rpc/gateway/cybersource/user
   ```

   Replacing 'papercut' as for the previous step.

5. Find the setting `Notifications -> Addresses and Options -> Merchant POST URL`. Enable the checkbox for this setting. In the textbox enter:

   ```
   http://papercut.myorg.edu/rpc/gateway/cybersource/transaction
   ```

   Where 'papercut.myorg.edu' is a hostname that can be resolved from the internet. CyberSource will send transaction details to this address. The section 'Stage 3: Firewall Configuration' has more information about ensuring that this address is available.

6. Press the `Update` button.

7. Navigate to `Tools & Settings -> Hosted Order Page -> Security`.

8. Under 'Generate Security Script' select the radio button 'JSP' and press 'Submit'.

9. A download box will appear for a file 'HOP.jsp'. Save this file in a safe place; it contains sensitive information, and will be required in the next stage.

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Stage 2: Installing the Payment Gateway Module

1. The Payment Gateway Module will function during the PaperCut NG 40 day trial period. After this, the module must be licensed. If you have been supplied with a new license take the time to install this now. The license install procedure is documented in the PaperCut user manual chapter 'Licensing and Support'.

2. Download the Payment Gateway Module from the PaperCut website at

   http://www.papercut.com/anonftp/pub/pcng/ext/payment-gateway/pcng-payment-gateway-module.exe

3. Install the module into the same directory as PaperCut NG. This is normally:

   ```
   C:\Program Files\PaperCut NG
   ```

4. Open the file:

   ```
   [app-path]\server\lib-ext\ext-payment-gateway-
   cybersource.properties
   ```

   in a text editor such as Notepad.

5. Locate the line `cybersource.enabled=N` and change the `N` to `Y`. This will enable the CyberSource module.

6. Locate the line `cybersource.merchant-id` and enter your merchant id. The merchant id assigned by CyberSource and used to log into the CyberSource Business Center.

7. Locate the line `cybersource.public-key`

   This setting is obtained from the HOP.jsp file that was saved in Stage 1. Open the HOP.jsp file in a text editor (such as WordPad).

   Find the section near the top of the file that reads:

   ```
   private String getSharedSecret() {
       return "abcdef123456…";
   }
   ```

   Note: in older versions of CyberSource it was called "getPublicKey" – look for this if "getSharedSecret" does not exist.

   The text inside the quotation marks ("abcdef123456" in this case) is the 'public key'. Copy this text from inside the quotation marks only, and paste it next to the `cybersource.public-key` setting, on the right side of the = sign. There should be no spaces or newlines in the value.

8. Repeat step 9 for the setting `cybersource.serial-number` using the `getSerialNumber` section.

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9. Configure other options in this file as discussed in General Configuration Options in the Payment Gateway Module documentation, or by referring to the comments in the file itself. Options include limits on the amount to transfer, access groups and custom error messages.
   You may like to enable a group restriction to limit access to administrators until configuration is complete.

10. Save the file and exit the text editor.

11. Restart the *PaperCut Application Server* service via `Control Panel -> Administrative Tools -> Services` and wait 30 seconds.

12. Check the end of the log file at `[app-path]\server\logs\server.log` for any obvious error messages.

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Stage 3: Firewall Configuration

The CyberSource server communicates with the PaperCut server via HTTP to the URL specified in the '`Merchant POST URL`' setting in Stage 1. The CyberSource documentation recommends using ports 80 or 8080 for HTTP or port 443 for HTTPS (see Stage 5: Security for details). You will need to ensure that CyberSource is able to contact the PaperCut server via the internet on this hostname and port. This will usually involve the following network changes:

1. Set up a public DNS entry to ensure the PaperCut server is publicly accessible via a friendly name (e.g. papercut.myorg.edu). This will be the same name used for the '`Merchant POST URL`' setting in Stage 1.

2. Set up external firewall rules to port forward from the public address port (e.g. port 80) to the PaperCut server port 9191 (or 9192 for HTTPS).

   It is important that the firewall policy only applies to external hosts. Internal hosts will require direct access to the PaperCut server.

   During testing it may be appropriate to open access from any host, then lock down access to the CyberSource IP address range once it has been determined. Once a test transaction has been made via HTTP the CyberSource server IP address(es) may be gained from the payment gateway event log file (located at `[app-path]/server/logs/payment-gateway/event.log`).

   At the time of writing this address range was: `66.185.186.0/255`

3. Accessing the following URL with a web browser will display a simple confirmation page containing the current time, and can be used to test external access:

   `http://papercut.myorg.edu:9191/rpc/gateway/cybersource`

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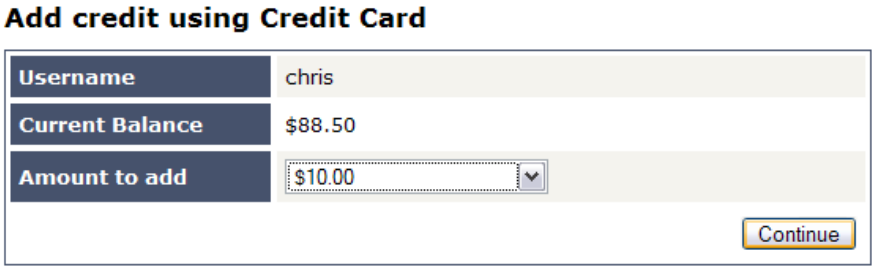
Stage 4: Testing

The Payment Gateway Module for CyberSource is now ready for testing. This test will involve performing a live transaction with a real credit card, testing real-world end-to-end functionality. Afterwards the payment may be voided/credited/refunded via the CyberSource Business Center. Note that transaction fees may be incurred for the payment or refunding.

1. Log into the PaperCut user web interface at http://papercut:9191/user
2. A new link called Add Credit should appear on the left. Click this link.
3. Select an amount to add and press Continue.



4. You should now be redirected to the CyberSource HOP for payment. Enter the payment details including a valid credit card number and associated details as requested.
5. Continue and confirm that the value is placed on the user's PaperCut account and the transaction is listed in their transaction history. See the Troubleshooting section if you have any problems.
6. The transaction should appear in the CyberSource Business Center, and may be voided or credited.

Note: PaperCut will connect to CyberSource in "live" mode by default. If you have configured a CyberSource account in "test" mode, you can configure PaperCut to connect to the test order page by editing the "`cybersource.hosted-order-page-url`" setting in the "`[app-path]\server\lib-ext\ext-payment-gateway-cybersource.properties`" config file. Comments in the file contain the default "test" and "live" page URLs to configure.

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Stage 5: Security

Transaction details are sent from CyberSource to PaperCut via a HTTP POST (to the 'Merchant POST URL'), and along with the user when returning to the PaperCut web interface. These details are protected from forgery by several signatures, signed using a private key specific to your setup (found in HOP.jsp, which should be protected).

While these transaction details do not contain the user's full card number, they may contain other information considered private, such as the billing address or email address. The security conscious may prefer to have these details sent over HTTPS instead of HTTP.

Enabling HTTPS involves two parts:

1. Ensuring that CyberSource POSTs transaction details to PaperCut via HTTPS.

2. Ensuring that users are redirected from CyberSource back to PaperCut via HTTPS.

Part 1 requires that PaperCut has been configured with a certificate signed by a trusted certificate authority (CA), so that CyberSource can validate the connection. For information about installing a CA signed certificate see the user manual section `Appendix A. Tools (Advanced) -> SSL/HTTPS Key Generation`.

Once PaperCut has been configured with a certificate the three URLs configured in the CyberSource Business Center (`Receipt Response URL`, `Decline Response URL` and `Merchant POST URL`) may be configured to use 'https://' and port 443. E.g. for the Merchant POST URL:

```
https://papercut.myorg.edu/rpc/gateway/cybersource/transaction
```

This public address should then port forward to the PaperCut server on port 9192.

Stage 6: Go-Live

If a group restriction was enabled in Stage 2 it can now be removed or altered to allow access to end-users. Your system is now live and will accept and charge credit cards.

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Troubleshooting

Administrators may find information in the following log files useful when trying to troubleshoot setup/configuration problems or issues reported by end-users.

Payment Gateway Event Log:
`[app-path]\server\logs\payment-gateway\event.log`
This log contains gateway specific error messages and events.

Application Log:
`[app-path]\server\logs\server.log`
This log contains general application specific error messages and events.

Transaction Log:
`[app-path]\server\logs\payment-gateway\transaction.log`
This log contains a list of successful transactions in a tab-delimited form.

Please feel free to contact the PaperCut Software Development Team at support@papercut.com if you require assistance.

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